

February 5, 2003

Dear Colleague:

*First Announcement for the Budget Planning Meeting – FY 2005*

We have scheduled the Office of Fusion Energy Sciences (OFES) FY 2005 Budget Planning Meeting (BPM) for Tuesday and Wednesday, March 18-19, 2003. This year, the meeting will be held at the Marriott Gaithersburg Washingtonian Center, 9751 Washingtonian Boulevard, Gaithersburg, MD (301-590-0044 or 1-800-228-9290). Please note that this is not the same hotel as last year's BPM. We have reserved a block of rooms at the hotel at the Government rate (\$150 plus 12% tax.). Reservations must be made on or before February 25, or the rate is not guaranteed. If you cancel before 6 pm for a given night, you will not be charged for shortening your planned stay. On the morning of Tuesday, March 18, 2003, there will be several seminars on topics of current interest at the same location. Attendees of the Planning meeting are encouraged to attend these seminars.

The primary objective of the planning meeting is for laboratories, General Atomics, and several of the larger university fusion programs to provide information to OFES managers on updated plans and budgets for FY 2005. The information from the BPM is one of several sources that OFES uses in developing the FY 2005 OFES budget request. The meeting will also give members of the fusion research community the opportunity to hear and discuss research plans put forth by their colleagues.

At this year's meeting, we will continue integrating some of the topics to be discussed so that they represent the broad range of science and technology efforts funded by OFES. Hence, we urge attendees to plan on participating for the entire duration of the meeting. A draft agenda is attached (Attachment 1) and we welcome your comments and suggestions for improving it. Guidance on the presentations is also attached (Attachment 2). The presentations should speak to the Four Thrust Areas that have been distilled from the Integrated Program Planning Activity (IPPA), with an emphasis on the science and technology that support ITER. Because of our interest in the use of the major national facilities (DIII-D, NSTX, C-Mod) and MST, we are requesting that these facilities provide written table- and bullet-form information separate from and in addition to the viewgraphs that will be presented at the meeting (see Attachments 3 and 4 for the format). We find that dialogue between those making the presentations and the audience is as important as the presentations themselves. We will take steps to ensure that sufficient discussion time is available within the allocated presentation time for each institution.

We will conduct the meeting under the following guidelines.

OFES program managers chair the individual sessions and will work with the institutions they support prior to the meeting to ensure that:

- They receive the information they need to prepare the FY 2005 budget,
- The information is presented within the time specified on the agenda.

The speakers will be responsible for putting together a presentation that:

- Meets the needs of the OFES program manager for information about plans, both national and international, for work in FY 2005. DIII-D, C-Mod, NSTX, and MST should include a brief (~5-10 minutes) talk on their institutional issues,
- Refrains from focusing on work that has been completed, and covers FY 2004 work only to the extent that is necessary for understanding the FY 2005 proposal,
- Clearly identifies new tasks (as opposed to continuing ones),
- Leaves sufficient time for discussions, and
- Is completed on time.

Presentations should deal explicitly with proposals for FY 2005. At this time, no decisions have been made concerning the Department's FY 2005 budget request. Therefore, until these decisions are made and announced, the presentations should include FY 2005 proposals for:

- A Decrement Budget case: 10% decrease relative to the funding in the FY 2004 Presidential Budget
- A Level Budget case: a prioritized list of increments building up from the Decrement Budget case to the FY 2004 Presidential Budget
- A Program Planning Budget case: a prioritized list of increments building up from the Level Budget case, to some reasonable level.

Please plan to discuss the tasks that will be part of the Decrement case, and build up to the additional tasks that will be undertaken at each of the other budget levels.

An important element of each presentation must be an explanation of how the tasks that are being proposed are related to the Four Thrust Areas (Burning Plasmas, Fundamental Understanding, Configuration Optimization, Materials and Technology), goals, objectives, and implementation approaches laid out in the "Report of the Integrated Program Planning Activity for the DOE's Fusion Energy Sciences Program"  
<http://vlt.ucsd.edu/IPPAFinalDec00.pdf>.

As usual, the presentations will be open to all DOE/OFES staff, DOE/Field Office staff, and representatives from other research institutions. This serves a second purpose of the meeting, which is to promote strategic planning integration and programmatic interactions among the programs and institutions. If there is a need for any of the attendees to enter the Germantown complex during the course of the meeting please let us know in advance. Please e-mail a list of all such possible attendees to TJ Moore ([TJ.Moore@science.doe.gov](mailto:TJ.Moore@science.doe.gov)) to allow faster access into the building. In particular, please identify foreign nationals or Permanent

Resident Aliens (PRA) at least 10 days in advance (30 days if from a sensitive country). We need to file a visit request for those people. Please note that access to DOE Germantown is still only through the North (Main) Lobby.

In addition to and separate from the BPM, we will be requesting more extensive information from several programs on institutional issues. OFES will work with the appropriate institutions to arrange these meetings and to provide guidance on the content.

If you have any questions about this meeting, please contact Darlene Markevich ([darlene.markevich@science.doe.gov](mailto:darlene.markevich@science.doe.gov), 301-903-4920), the person responsible for organizing the meeting this year. We would also encourage you to work closely with your OFES program managers as you prepare for this important meeting.

*(original signed)*

John Willis  
Director  
Research Division  
Office of Fusion Energy Sciences  
Office of Science

*(original signed)*

Michael Roberts  
Director  
Facilities & Enabling Technologies Division  
Office of Fusion Energy Sciences  
Office of Science

Attachments

Distribution:

J. Brooks, ANL  
S. Knowlton, Auburn U.  
E. Thomas, Auburn U.  
G. Navratil, Columbia  
M. Mauel, Columbia  
J. Johnson, Florida A&M  
S. Dean, FPA  
S. Allen, GA  
D. Baldwin, GA  
R. Callis, GA  
M. Campbell, GA  
V. Chan, GA  
J. Dahlburg, GA  
M. Murakami, GA  
R. Stambaugh, GA  
T. Taylor, GA  
K. McCarthy, INEEL  
D. Petti, INEEL  
A. Glasser, LANL  
B. Tumas, LANL  
S. Willms, LANL  
G. Wurden, LANL  
G. Logan, LBNL  
G. Bateman, Lehigh U.  
R. Cohen, LLNL  
D. Hill, LLNL  
B. Hooper, LLNL  
J. Lindl, LLNL  
W. Meier, LLNL  
B. Coppi, MIT  
J. Freidberg, MIT  
M. Greenwald, MIT  
I. Hutchinson, MIT  
J. Kesner, MIT  
E. Marmor, MIT  
J. Minervini, MIT  
R. Parker, MIT  
M. Porkolab, MIT  
R. Temkin, MIT  
J. Sethian, NRL  
D. Batchelor, ORNL  
M. Gouge, ORNL  
J. Lyon, ORNL  
S. Milora, ORNL  
P. Mioduszewski, ORNL  
J. Sheffield, ORNL  
D. Swain, ORNL  
N. Uckan, ORNL

S. Zinkle, ORNL  
R. Kurtz, PNNL  
R. Goldston, PPPL  
R. Hawryluk, PPPL  
J. Hosea, PPPL  
R. Nazikian, PPPL  
H. Nielson, PPPL  
M. Ono, PPPL  
M. Peng, PPPL  
C. Phillips, PPPL  
S. Sabbagh, PPPL  
N. Sauthoff, PPPL  
J. Schmidt, PPPL  
W. Tang, PPPL  
M. Zarnstorff, PPPL  
S. Zweben, PPPL  
D. Schnack, SAIC  
M. Ulrickson, SNL  
J. Hoagland, TVA  
M. Abdou, UCLA  
G. Morales, UCLA  
R. Taylor, UCLA  
R. Linford, UC Office of the President  
J. Cary, U. Colorado  
G. Odette, UCSB  
C. Baker, UCSD  
J. Boedo, UCSD  
S. Luckhardt, UCSD  
R. Moyer, UCSD  
F. Najmabadi, UCSD  
M. Rosenbluth, UCSD  
J. Drake, U. Maryland  
A. Hassam, U. Maryland  
C. Liu, U. Maryland  
R. Siemon, U. Nevada, Reno  
R. Betti, U. Rochester  
R. Hazeltine, U. Texas  
J. Van Dam, U. Texas  
A. Hoffman, U. Washington  
T. Jarboe, U. Washington  
R. Fonck, U. Wisconsin  
S. Prager, U. Wisconsin  
D. Anderson, U. Wisconsin  
G. Kulcinski, U. Wisconsin  
J. Callen, U. Wisconsin  
C. Keane, DOE  
R. Schneider, DOE  
J. Yeck, FAO  
M. Foster, OAK  
H. Clark, OR  
J. Faul, PAO

Attachment 1

*DRAFT*

FY 2005 OFES Budget Planning Meeting  
Marriott Gaithersburg Washingtonian Center  
9751 Washingtonian Boulevard, Gaithersburg, MD  
March 18 -19, 2003

Tuesday, March 18

Issues Seminar

<b>08:30</b>	D. Anderson (U. Wisconsin) Compact Stellarators	
09:10	G. Logan (LBNL) Next Step in Heavy Ion Fusion	
09:50	<i>Break</i>	
10:10	J. Yeck (Fermi Lab) Experiences from the Large Hadron Collider Collaboration	
10:50	N. Sauthoff (PPPL) International Tokamak Physics Activity (ITPA)	
<b>11:30</b>	<i>Lunch</i>	
<b>01:00</b>	<b>Opening Comments</b>	Anne Davies

**Program Presentations**

(Names in parentheses are those of OFES managers who will chair the corresponding sessions.)

<b>01:15</b>	<b>Enabling R&amp;D</b>	(Sam Berk)
01:15	Speakers: Issues/Challenges/Plans	Charlie Baker
01:55	Issues/Challenges/ Plans	Stan Milora
02:30	Community Discussion	
<b>02:45</b>	<i>Break</i>	

<b>03:00</b>	<b>IFE</b>	(Ron McKnight)
03:00	Speakers: Issues/Challenges/Plans	Grant Logan
03:30	Issues/Challenges/Plans	John Lindl
04:00	Community Discussion	
<b>04:15</b>	<b>Theory</b>	(Steve Eckstrand)
04:15	Speakers: Theory Program Overview	Steve Eckstrand
04:25	Theory Issues/Plans	Vince Chan
04:55	New Transport Initiative	Paul Terry
05:15	Community Discussion	
<b>05:30</b>	<i>Adjourn</i>	

Wednesday, March 19

<b>08:30</b>	<b>DIII-D</b>	(Erol Oktay)
08:30	Speakers: DIII-D Research Plans	Ron Stambaugh
08:50	DIII-D Research Plans	Tony Taylor
09:30	GA Institutional Issues	Dave Baldwin
09:40	Community Discussion	
<b>10:00</b>	<i>Break</i>	
<b>10:15</b>	<b>C-Mod</b>	(Rostom Dagazian)
10:15	Speakers: C-Mod Research Plans	Earl Marmor
10:35	C-Mod Research Plans	Ian Hutchinson
10:50	MIT Institutional Issues	Miklos Porkolab
11:00	Community Discussion	
<b>11:15</b>	<b>NSTX</b>	(Don Priester)
11:15	Speakers: NSTX Introduction/Plans	Martin Peng
11:40	Facility and Budget Plans	Masa Ono
12:05	PPPL Institutional Issues	Rob Goldston
12:15	Community Discussion	
<b>12:30</b>	<i>Lunch</i>	
<b>01:30</b>	<b>ICC</b>	(Francis Thio)
01:30	Speakers: MST Plans/Institutional Issues	Stewart Prager
02:00	Other ICCs Issues/Challenges	Bick Hooper
02:30	Community Discussion	
<b>02:45</b>	<i>Break</i>	
<b>03:00</b>	<b>Stellarators</b>	(Chuck Finfgeld)
03:00	Speakers: NCSX	Hutch Nielson
03:20	Other Stellarators	Jim Lyon
03:35	Community Discussion	
<b>03:45</b>	<b>Plasma Science</b>	(Ron McKnight)
03:45	Speakers: Plasma Science Update	Ron McKnight
03:55	Community Discussion	
<b>04:00</b>	<b>International Activities and ITER</b>	(Erol Oktay)
04:00	Speakers: International Activities Update	Ned Sauthoff
04:20	Community Discussion	



<b>04:30</b>	<b>More Institutional Issues</b>	(John Willis)
04:30	Speakers: ORNL	Stan Milora
04:45	LANL	Glen Wurden
05:00	LLNL	John Lindl
<b>05:15</b>	<i>Adjourn</i>	

## Attachment 2

### **Guidance for Major Facilities: DIII-D, NSTX, C-Mod, and MST**

The presentations of the major fusion facilities should be keyed to the OFES budget categories – research, operations, and upgrades, and to the Integrated Program Planning Activity (IPPA). Research plans should be described in terms of the Four Thrust Areas (Burning Plasmas, Fundamental Understanding, Configuration Optimization, Materials and Technology), with emphasis on the science and technology that support ITER. Major facilities are encouraged to discuss connections to any ICC or basic plasma physics programs.

Each presentation on research activities should include the information in Attachments 3 and 4. Please note that all diagnostics implemented on facilities should be funded with Capital Equipment dollars. Any such diagnostics costing more than \$2 Million should be identified as a Major Item of Equipment (MIE).

### **General Guidance:**

Presenters should load their viewgraphs onto a fusion web site in advance of the meeting. If your viewgraphs are not on the web a week before the meeting you will be responsible for bringing enough copies for all attendees. Presentations should be completed in PowerPoint (.ppt), Acrobat (.pdf), or other presentation format that can be easily projected from a laptop.

Please remember that the primary purpose for the meeting is to provide budget and programmatic information to OFES program managers for preparing the FY 2005 budget. In order to get this information and keep the meeting on schedule, we want all the presentations to focus on the proposed work, budgets, and plans. Supplementary information can be distributed to participants as needed.

In addition, we invite you to prepare an institutional summary table that would list all the submitted FWP's. This table should have the task number, task description, and requested budget for each FWP. The table will help us identify which tasks are or are not funded in the initial program letters.

Attachment 3

**Example Table Format for Budget/Run Time/Staffing Information: Information is to be provided in writing for the DIII-D, NSTX, C-Mod, and MST programs**

Your Major Facility Name Here

	FY03 <u>Approp.</u>	FY04 <u>Request</u>	FY05 <u>-10%</u>	FY05 <u>Level*</u>	FY05 <u>PPL**</u>
<u>Funding (\$ Millions)</u>					
Major Program Element 1	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Major Program Element 2	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Major Program Element 3	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
...etc.					

(Work with your OFES program manager for the Major Program Elements that make the most sense in understanding your facility's budget. Examples of Major Program Elements are: Research Operations, Facility Operations, Collaborations, International Activities, etc. Use subelements as necessary to make your budget more comprehensible; *e.g.*, experiment, theory, diagnostics, fast wave antennas, etc.)

	FY03 <u>Approp.</u>	FY04 <u>Request</u>	FY05 <u>-10%</u>	FY05 <u>Level*</u>	FY05 <u>PPL**</u>
<u>Staff Levels (FTEs)</u>					
Scientists and Engineers (not incl. postdocs)	xx	xx	xx	xx	xx
Technicians & Direct Reports	xx	xx	xx	xx	xx
Admin/support & clerical (incl. OH)	xx	xx	xx	xx	xx
Professors	xx	xx	xx	xx	xx
Postdocs	xx	xx	xx	xx	xx
Graduate Students	xx	xx	xx	xx	xx
Industrial Subcontractors	xx	xx	xx	xx	xx

	FY02 <u>Actual</u>	FY03 <u>Approp.</u>	FY04 <u>Request</u>	FY05 <u>-10%</u>	FY05 <u>Level*</u>	FY05 <u>PPL**</u>
<u>Facility Run Schedule</u>						
Scheduled Run wee Users (Annual)	xx	xx	xx	xx	xx	xx
a.) Host	xx	xx	xx	xx	xx	xx
b.) Non-host (U.S.)	xx	xx	xx	xx	xx	xx
c.) Non-host (foreign)	xx	xx	xx	xx	xx	xx
d.) Graduate students	xx	xx	xx	xx	xx	xx

Operations/Upgrades  
Staff (Annual)

a.) Host	xx	xx	xx	xx	xx	xx
b.) Non-host	xx	xx	xx	xx	xx	xx

\*Level Budget case is flat-flat, *i.e.*, no cost of living increase

\*\*Program Planning Budget case, *up to some reasonable level* above the Level Budget case

Attachment 4

**Example Bullet Format for Detailed Information: Information is to be provided in writing for the DIII-D, NSTX, C-Mod, and MST programs**

FY03

1. Comprehensive description of research plans, including work to be carried out by off-site team members and through international collaborations, and work that will be done on-site by collaborators, both U.S. and foreign.
2. One to three research accomplishments that you expect in your program, in plain English, for use in writing the FY 2005 budget documents.
3. Information on the physical infrastructure needs such as facility maintenance, GPP, or similar items.
4. Awards to date: list recipient's name and type of award (*e.g.*, APS Fellow, Presidential Early Career Award, R&D 100, Nobel Prize, etc.)

FY04

*Decrement Budget Case (-10% with respect to the FY04 President's Request)*

1. Respond to 1 through 3 above under FY03
2. Funding at this level would result in the following scientific, personnel, schedule, etc. impacts:

*Level Budget Case (i.e., flat with respect to the FY04 President's Request)*

1. Using a prioritized list of increments building up from the Decrement Budget case, respond to 1 through 3 above under FY03

*Program Planning Budget Case (up to some reasonable level above the Level Budget case)*

1. Using a prioritized list of increments building up from the Level Budget case, where would you put additional money and what would be the benefits to your research program of the incremental funding items.

FY05

*Decrement Budget Case (-10% with respect to the FY04 President's Request)*

1. Respond to 1 through 3 above under FY03
2. Funding at this level would result in the following scientific, personnel, schedule, etc. impacts:

*Level Budget Case (i.e., flat with respect to the FY04 President's Request)*

1. Using a prioritized list of increments building up from the Decrement Budget case, respond to 1 through 3 above under FY03

*Program Planning Budget Case ((up to some reasonable level above the Level Budget case)*

1. Using a prioritized list of increments building up from the Level Budget case, where would you put additional money and what would be the benefits to your research program of the incremental funding items.